ATRIAL FIBRILLATION AND OUTCOMES IN A LARGE COHORT OF CRT RECIPIENTS: RESULTS FROM THE ALTITUDE STUDY

ACC Poster Contributions
Ernest N. Morial Convention Center, Hall F
Tuesday, April 05, 2011, 9:30 a.m.-10:45 a.m.

Session Title: Clinical Electrophysiology –Interaction of Atrial Fibrillation with Heart Failure, Surgery, and Atrial Size
Session-Poster Board Number: 1161-402

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Background: Atrial fibrillation (AF) is a common co-morbidity in patients (pts) receiving Cardiac Resynchronization Therapy defibrillators (CRT-D). The effect of AF on pt outcomes in CRT-D remains incompletely understood. We sought to evaluate outcomes in CRT-D pts according to AF burden, using the Boston Scientific LATITUDE® remote monitoring system ALTITUDE database.

Methods: The AF burden was determined in the first year of implant using atrial tachycardia response (ATR) episode length and pacing mode. Pts were grouped as having Persistent AF (ATR > 7 days or programmed VVI/R, DDI/R mode), Paroxysmal AF 1-7 days (1 day < ATR < 7 days), Paroxysmal AF < 1 day (1 minute < ATR < 1 day), or no AF (all others). Survival after the first year was evaluated between groups using Cox Proportional Hazard models adjusting for age, gender, percent CRT pacing and shock therapy in year 1.

Results: The 23,743 pts studied consisted of pts with no AF (N=13,331, 56%), Persistent AF (N=4,711, 20%), Paroxysmal AF 1-7 days (N=896, 4%), and Paroxysmal AF < 1 day (N=4,805, 20%). Pts with AF were more likely to be male (78% vs 68%), older (72 ± 11 vs 69 ± 11), have lower CRT pacing (median 97% vs 99%) and more likely to have a shock episode within 1 year post implant (13% vs 6.4%), all p<.001. When compared to no AF, all 3 AF groups exhibited decreased survival (figure).

Conclusion: In a large cohort of CRT recipients, AF was identified as an independent marker for decreased survival. This observation was significant even for a very low burden of AF.